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Concentrations of heavy metals in viviparous blenny (*Zoarces viviparus* L.) and flounder (*Platichthys flesus* L.) from Finnish coastal waters and their possible harmful effect on the health condition of the fishes

When the viviparous blenny or eelpout recovered in 1994–95 after a period of nearly total absence in Finnish coastal waters, this fish was chosen in 1996 for monitoring of both health condition and concentration of heavy metals. Eelpouts from selected coastal areas (including Tvärminne) have been analysed for growth, food, health condition and content of heavy metals. Preliminary results from the vicinity of Tvärminne Zoological Station show a good health condition with a low rate of parasitic infestation and the following metal concentrations in muscletissue respectively: Mn 2.2, 5.0, Fe 44.4, 788.6, Cu 2.5, 9.9, Zn 46.7, 70.7, Cd 0.02, 0.7, Pb 0.5, 2.3, Ni 0.7, 1.1. ppm (mg/kg) dry weight. The unexpectedly high metal concentrations found in eelpout require more attention.

Flounders from different coastal areas (including Tvärminne) have also been analyzed for heavy metal concentrations and for condition of health in cooperation with the Parasitological Institute of Åbo Academi-University. The mean concentration of Hg in muscle tissue of flounders from Tvärminne was 0.08 ppm (mg/kg) fresh weight compared with 0.25 ppm in muscle tissue of flounders from a well known polluted area at the mouth of River Kokemäenjoki (Bothnian Sea, Gulf of Bothnia).

Publications:

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